

General Description

The CMS9926A uses advanced trench technology to provide excellent RDS(ON). This device is suitable for use as a unidirectional or bi-directional load switch.

Features

- RDS(ON)=19mΩ @ VGS=4.5V
- RDS(ON)=25mΩ @ VGS=2.5V
- Dual MOSFET in surface mount package.
- High Density Cell Design For Ultra Low On-Resistance

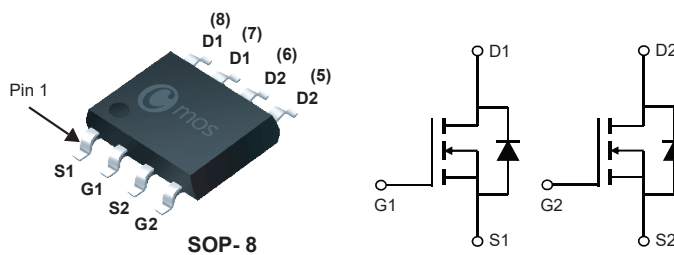
Product Summary

BVDSS	RDS(on) max.	ID
20V	19mΩ	6.5A

Applications

- DC/DC Converter
- Load Switch
- Battery protection
- Power management

SOP- 8 Pin Configuration



Type	Package	Marking
CMS9926A	SOP- 8	CMS9926A

Maximum Ratings and Thermal Characteristics (TA = 25°C unless otherwise noted)

Symbol	Parameter	Rating	Units
V _{DS}	Drain-Source Voltage	20	V
V _{GS}	Gate-Source Voltage	±10	V
I _D	Continuous Drain Current	6.5	A
I _{DM}	Pulsed Drain Current	30	A
P _D @T _A =25°C	Total Power Dissipation	2	W
T _{STG}	Storage Temperature Range	-55 to 150	°C
T _J	Operating Junction Temperature Range	-55 to 150	°C

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
R _{θJA}	Thermal Resistance, Junction-to-Ambient (t≤10sec)	---	62.5	°C/W

Electrical Characteristics ($T_J=25^{\circ}\text{C}$, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$, $I_D=250\mu A$	20	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=4.5V$, $I_D=6A$	---	15	19	mΩ
		$V_{GS}=2.5V$, $I_D=5.2A$	---	19	25	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$, $I_D=250\mu A$	0.5	---	1.0	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=16V$, $V_{GS}=0V$	---	---	1	uA
I_{GSS}	Gate-Source Leakage Current	$V_{GS} = \pm 10V$, $V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=5V$, $I_D=3.5A$	---	7.5	---	S
Q_g	Total Gate Charge	$V_{DS}=10V$, $V_{GS}=4.5V$, $I_D=6A$	---	13	20	nC
Q_{gs}	Gate-Source Charge		---	3	---	
Q_{gd}	Gate-Drain Charge		---	3.3	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DD}=10V$, $V_{GS}=4.5V$ $R_G=6\Omega$, $I_D=1A$	---	25	---	ns
T_r	Rise Time		---	40	---	
$T_{d(off)}$	Turn-Off Delay Time		---	50	---	
T_f	Fall Time		---	20	---	
C_{iss}	Input Capacitance	$V_{DS}=10V$, $V_{GS}=0V$, $f=1MHz$	---	480	---	pF
C_{oss}	Output Capacitance		---	65	---	
C_{rss}	Reverse Transfer Capacitance		---	55	---	

Diode Characteristics

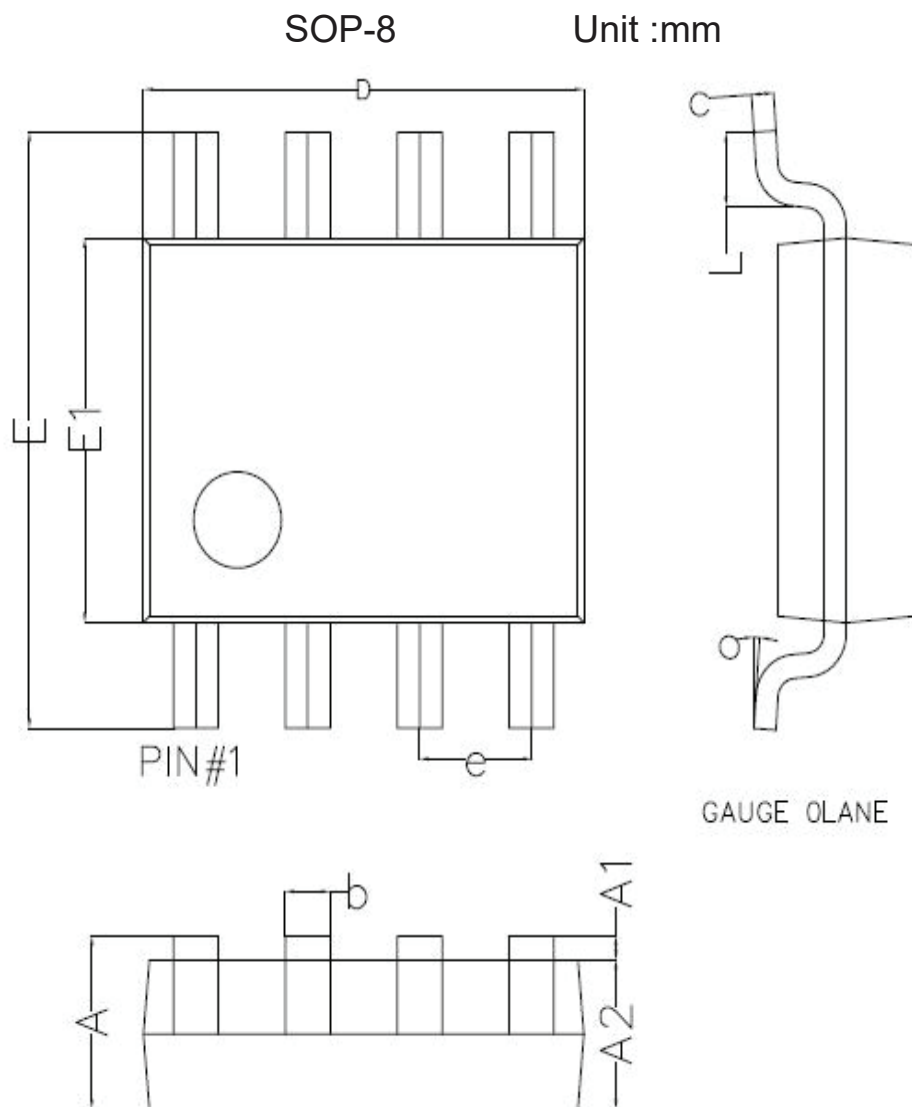
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{SD}	Diode Forward Voltage	$V_{GS}=0V$, $I_S=1.7A$	---	---	1.2	V

This product has been designed and qualified for the consumer market.

Cmos assumes no liability for customers' product design or applications.

Cmos reserves the right to improve product design ,functions and reliability without notice. Please refer to the latest version of specification.

Package Dimension



Symbol	Dim in mm		
	Min	Nor	Max
A	1.35	1.55	1.75
A1	0.02	0.065	0.10
A2	1.35	1.45	1.55
b	0.33	0.42	0.51
c	0.17	0.21	0.25
D	4.80	4.90	5.00
e	1.270 (BSC)		
E	5.80	6.00	6.20
E1	3.80	3.90	4.00
L	0.4	0.835	1.27
θ	0°	4°	8°